

## Public and private decision makers should place due attention to the likelihood that high risk high reward options will fail.

*The old saying goes, “no risk, no reward”. But what about initiatives that have a high risk factor and promise a high level of reward, such as large government projects like the NHS National Programme for IT? [Adam Oliver](#) argues that governments can often ‘anchor’ too heavily on projects that promise the earth, but might potentially cost it as well.*

One of the key findings in the field of behavioural economics is that of ‘preference reversal’; i.e. that in some contexts, people’s preference for one or the other of two goods will often depend on how their preference is elicited. This observation clashes with standard economic theory, which assumes that individual preference is ‘fixed and stable’, and suggests that people will often construct their preferences according to the tasks that they face.

Consider, for instance, the following example, taken from the work of Paul Slovic and Sarah Lichtenstein, arguably the founders of the preference reversal field and the associated notion of constructed preference. A person is offered two lottery tickets, called the *P-bet* and the *\$-bet*, which offer the following odds:

***P-bet*: (\$4, 35/36; -\$1, 1/36)**

***\$-bet*: (\$16, 11/36; -\$1.50, 25/36)**

What the above shows is that the *P-bet* offers a 35/36 chance of winning \$4 and a 1/36 chance of losing \$1 (i.e. a good chance of a moderate outcome), whereas the *\$-bet* offers an 11/36 chance of winning \$16 and a 25/36 chance of losing \$1.50 (i.e. a moderate chance of a good outcome). Both bets have an expected value of approximately \$3.85. It is often observed that when asked to choose between the *P-bet* and the *\$-bet*, people will opt for the *P-bet*. However, when asked the value the two bets separately, people tend to place a higher monetary value on the *\$-bet*. In their early experiments, Slovic and Lichtenstein observed this systematic preference pattern – choosing the *P-bet* but valuing the *\$-bet* higher – in up to about 80 per cent of their respondents, and since then preference reversal has proved to be a robust finding in a great many studies.

The most accepted explanation for why people often demonstrate a reversal of preference across choice and valuation tasks of the type detailed above is that when openly valuing options, people have nothing really to go on regarding what those options are really worth to them. We thus anchor on whatever is most salient; in high risk high payoff options, the anchor is often the high payoff, and we insufficiently adjust our valuations downwards to account for the high risk.

That we often might overvalue options that entail considerable risk is sometimes quite harmless and adds to life’s small entertainments (e.g. playing the lottery). Occasionally, however, anchoring too heavily on fabulous if unlikely outcomes can lead to enormous waste. The apparent failure of the latest effort to introduce a [system-wide electronic health record in the NHS](#) springs to mind, a predictable outcome from what may well prove to be the most costly unsuccessful initiative in the history of the UK health sector.

The general lesson therefore appears to be that if you are asked to value a high risk but high reward option, you run the risk of overvaluing the option by not considering carefully enough the probability that the good outcome will not be realised. Therefore, the general public, policy makers, financial advisers and others should pay very close attention to the usually high probability that something will not work out when the risk is great.